

Amendment to Specification

Please amend paragraph [25] that begins on Page 8 and ends on Page 9 to read as follows.

Referring in addition to Figures 3 and 4, the inner workings of needle control valve 36 are illustrated. Valve assembly 36 includes a carrier assembly 74 which defines a portion of nozzle supply passage 67, a connection passage 70, a low pressure passage 71 and a needle control passage 59. The valve assembly 36 is a two position three way valve that includes a needle control valve member 89 that is moveable between contact with a high pressure seat 94 and a low pressure seat 95. Depending upon the position of valve member 89, needle control passage 59, which is fluidly connected to needle control chamber 60 (Figs. 1 and 2), is fluidly connected to nozzle supply passage 67 via connection passage 70 or to fuel inlet 24 via low pressure passage 71. Needle control valve assembly 36 includes a second electrical actuator 38 which in the illustrated embodiment is a stator assembly 37, but could also be another type of electrical actuator, such as a piezo, a voice coil, etc. The stator assembly 37 includes a stator 90, a coil 92 and a pair of female electrical socket connectors 57 that are electrically connected to coil 92. Stator assembly 37 is attached to carrier 102 to produce a carrier assembly 74. The female electrical socket connection 57, which could instead be male, opens through top surface 103 and permits an electrical extension 56 to mate with stator assembly 37 within injector body 21 while providing exposed terminals for insulated conductors 55 outside of upper portion 26. As illustrated, the socket connection is preferably oriented at a small angle, greater than zero, with respect to centerline 18. Valve member 89 is biased downward to close low pressure seat 95 by a biasing spring 91 via an armature 93 that is attached to valve member 89. When coil ~~81~~92 is energized, armature 93 is lifted upward causing valve member 89 to open low pressure seat 95 and close high pressure seat 94. Because the flow area is past seats 94 and 95 effect the performance of the fuel injector 14, such as by effecting the opening and/or closing rate of direct control valve 29, flow restrictions 96 and 97 are included. In particular, flow restriction 96, which is preferably manufactured in a valve lift spacer 78 as a flow area that is restrictive relative to the flow

area past seat 94. Likewise, flow restriction orifice 97 preferably has a flow area that is restricted relative to the flow past low pressure seat 95. Because these respective orifices 96 and 97 are based upon simple bore diameters rather than a clearance area between two separate moving parts, the performance between respective fuel injectors can be made more uniform. Furthermore, because these features are machined in a single valve lift spacer 78, the manufacturability and assembly of needle control valve assembly 36 can be improved.